



1999-10-20

reference ISO/VOTE/dn

SECRETARIAT OF ISO/TC 184/SC 4 NIST/MSID Metrology, Room A127 GAITHERSBURG, MD 20899, USA

Dear Sir or Madam,

ISO/DIS 10303-44

We have pleasure in enclosing the table of replies indicating the result of voting on the above draft, together with copies of all comments received. This table of replies will constitute annex A to the report of voting referred to in the ISO/IEC Directives (1995), Part 1, sub-clause 2.6.5.

The secretary is kindly requested to arrange for the attached form 13 'Report of voting' to be completed by the chairman to show the action to be taken with regard to further processing of this draft. Your attention is drawn to the ISO/IEC Directives (1995), Part 1, sub-clause 2.6.4 setting out the options available.

At the same time, the secretary is requested to prepare annex B to the report of voting, reproducing the comments received and giving the observations of the secretariat on each. For this purpose, please use the forms 'Report of voting'/Annex B which have been supplied to you separately.

In accordance with the ISO/IEC Directives, the Central Secretariat is required to circulate the full report to the P-members of your committee within three months. It is therefore essential that we receive from you the completed form 13, including annex B (comments and secretariat observations) by 2000-01-20.

In the case of a decision by the chairman to proceed with the publication, the FDIS should be prepared by the secretariat without delay, and should preferably be forwarded to the Central Secretariat at the same time as the report of voting.

Gabriel Barta

Standards Department

Mr. D. Wandmacher (Chairman of ISO/TC 184/SC 4) (with comments) Mme C. Hermetet-Filez (Secretary of ISO/TC 184) (without comments) cc.

international

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TC 184/SC 4 ISO/DIS 10303-44 VOTING BEGAN ON/DEBUT DU VOTE:1999-05-06 TIME LIMIT FOR REPLY/DELAI:1999-10-06

TITLE: Industrial automation systems and integration -- Product data representation and exchange -- Part 44: Integrated generic resource: Product structure configuration

TITRE: Systèmes d'automatisation industrielle et intégration --Représentation et échange de données de produits --Partie 44: Ressources génériques intégrées: Configuration

de structure de produits

A DISAPPROVAL/DESAPPR APPROVAL/APPROB MEMBER BODY/COMITE MEMBRE	BSTENTION OBATION ATION	ABS DISAPPROVAL/DESAPPROVAL/APPROBAS MEMBER BODY/COMITE MEMBRE	STENTION BATION TION
Australia (SAI) Brazil (ABNT) Canada (SCC) China (CSBTS) Czech Republic (CSNI) France (AFNOR) Germany (DIN) Italy (UNI) Japan (JISC) Korea, Republic of (KATS) Netherlands (NNI)	PXPXOXPXPXPXPXPXPXPXPXPXPXPXPXPXPXPXPXP	Norway (NSF) Poland (PKN) Portugal (IPQ) Russian Federation (GOST R) Slovenia (SMIS) Spain (AENOR) * Sweden (SIS) Switzerland (SNV) United Kingdom (BSI) USA (ANSI) T O T A L	P X P X X *** P X X *** S X ***

* = Comments / commentaires

** = P-member having abstained and therefore not counted in the vote / Membre (P) s'abstenant de voter; n'est donc pas compté dans le vote

P-MEMBERS VOTING: MEMBRES (P) VOTANT:	15	IN FAVOUR OUT OF EN FAVEUR SUR	15 = 100.00%	REQUIREMENT >= 66,66% CRITERE
MEMBER BODIES VOTING:	0	NEGATIVE VOTES OUT VOTES NEGATIFS SUR	18 = 0.00%	REQUIREMENT <= 25% CRITERE
1				

THIS DRAFT HAS THEREFORE BEEN APPROVED in accordance with the ISO/IEC Directives, Part 1, sub-clause 2.6.3.

CE PROJET EST DONC APPROUVE selon les Directives ISO/CEI, Partie 1, paragraphe 2.6.3



REPORT OF VOTING ON ISO/DIS			
Closing date of voting	ISO/TC /SC		
	Secretariat		

1 Result of the voting				
The above-mentioned document was circulated to member bodies on the date shown in annex A, with a request that the Central Secretariat be informed whether or not member bodies were in favour of registration of the DIS as a Final Draft International Standard.				
The replies listed in annex A have been received.				
to t	e annex B. (This annex is circulated only he P-members of the committee but is illable to any other member body on uest.)			
4 Decision of the Chairman	to a control of the 100/150 Divertives and will be			
The DIS has been approved in accordance with the conditions of 2.6.3 of part 1 of the ISO/IEC Directives and will be submitted without change, other than editorial, for circulation as an FDIS to all member bodies.				
In the light of technical comments received,				
a new DIS will be submitted to the Central Secretariat for circulation to the member bodies.				
a new committee draft will be distributed for comment.				
the DIS and comments will be considered at the next meeting.				
Signature of the secretary	Signature of the chairman			
	·			
Date:	Date:			



Issued by: Lennart Persson

Swedish comments on ISO/DIS 10303-44, Industrial automation systems and integration - Product data representation and exchange - Part 44: Integrated generic resource: Product structure configuration

ISSUE NUMBER:

SWE-1

ORIGINATOR:

Bernd G. Wenzel, Eurostep, Bernd.Wenzel@Eurostep.com

DATE:

1999-09-12

SENTENCE/ABSTRACT/KEYWORD:

Mandatory attribute of PRODUCT_CONCEPT should be OPTIONAL

DESCRIPTION: The attribute MARKET_CONTEXT in entity PRODUCT_CONCEPT should be OPTIONAL. Otherwise implementations of AP214 are forced to provide faked data. This is not only unnecessary effort. It also contradicts the principles of the ISO 9000 series of standards, because it is practically impossible to define the responsibility for such data in any reasonable way.

PROPOSED SOLUTION: Make the attribute OPTIONAL

CLASSIFICATION1:

minor/technical

CLAUSE:

5,3.5

PAGE:

24

RELATED ISSUE:

RELATED GRAPHIC:

ISSUE NUMBER:

SWE-2

ORIGINATOR:

Bernd G. Wenzel, Eurostep, Bernd.Wenzel@Eurostep.com

DATE:

1999-09-13

SENTENCE/ABSTRACT/KEYWORD:

Mandatory attribute of PRODUCT_CONCEPT_FEATURE should be OPTIONAL

DESCRIPTION: The attribute NAME in entity PRODUCT_CONCEPT_FEATURE should be OPTIONAL. Otherwise implementations of AP214 are forced to provide faked data. This is not only unnecessary effort. It also contradicts the principles of the ISO 9000 series of standards, because it is practically impossible to define the responsibility for such data in any reasonable way.

PROPOSED SOLUTION: Make the attribute OPTIONAL

CLASSIFICATION1:

minor/technical

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SMS, Svensk Material- & Mekanstandard, med styrelsen i Stockholm, är auktoriserad standardiseringsorganisation utsedd av SIS, Standardiseringen i Sverige SMS, Swedish Materials and Mechanics Standards, is a standardization body authorized by SIS, Swedish Institute for Standards postgiro

1999-10-05





CLAUSE:

5.3.6

PAGE:

25

RELATED ISSUE:

RELATED GRAPHIC:

ISSUE NUMBER:

SWE-3

ORIGINATOR:

Bernd G. Wenzel, Eurostep, Bernd.Wenzel@Eurostep.com

DATE:

1999-09-13

SENTENCE/ABSTRACT/KEYWORD:

Mandatory attributes of CONFIGURATION_ITEM should be OPTIONAL

DESCRIPTION: The attributes ID and NAME in entity CONFIGURATION_ITEM should be OPTIONAL. Otherwise implementations of AP214 are forced to provide faked data. This is not only unnecessary effort. It also contradicts the principles of the ISO 9000 series of standards, because it is practically impossible to define the responsibility for such data in any reasonable way.

PROPOSED SOLUTION: Make the attribute OPTIONAL

CLASSIFICATION1:

minor/technical

CLAUSE:

6.4.4

PAGE:

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RELATED ISSUE:

RELATED GRAPHIC:

ISO 10303-41 DIS Issue form

STEP - IGR: Product structure configuration

INTRODUCTION 1.

This document presents the proposed UK vote, comments and recommendations on ISO/DIS 10303-44: IGR: Product structure configuration

VOTING RESPONSE 2.

The UK votes APPROVAL of ISO/DIS 10303-44 with the following comments.

COMMENTS 3.

ISSUE NUMBER UK-44-01

AUTHOR: Ray Goult

CLASSIFICATION: Minor Editorial

DESCRIPTION: The pagination of the preliminary part of the document is wrong with odd and even pages on the wrong sides of the paper. This could be corrected by introducing a blank page as backing for the ISO cover sheet.

ISSUE NUMBER UK-44-02

AUTHOR: Ray Goult CLAUSE: Foreword

CLASSIFICATION: Minor Editorial

DESCRIPTION: The boiler plate text should be amended to take account of the new name 'Integrated generic resource' for the 40 series parts. I suggest

The parts of ISO 10303 fall into one of the following series: description methods, integrated generic resources, application interpreted protocols, ...

This part of ISO 10303 is a member of the integrated generic resources series. The integrated generic resources specify a single conceptual product model.

ISSUE NUMBER UK-44-03

AUTHOR: Ray Goult CLAUSE: Annex D

CLASSIFICATION: Minor Editorial

DESCRIPTION: In most of the EXPRESS-G diagrams the notation used for inter-schema references appears to be not in accordance with part 11 annex D - inner boxes should be oval. I suspect the problem is the lack of differential width for the outer box.

ISSUE NUMBER UK-44-04

AUTHOR: Julian Fowler CLAUSE: Introduction

CLASSIFICATION: Minor Technical

STEP - IGR: Product structure configuration

DESCRIPTION:

The wording of the Introduction is misleading with respect to the roduct_structure_schema.

The text here refers to products and their composition, whereas the the schema deals primarily with relationships between and amongst product_definitions.

PROPOSED RESOLUTION:

Add text to the Introduction stating that the basis for the product_structure_schema is the description of the composition of products in terms of relationships between and amongst life-cycle and/or discipline views of products.

ISSUE NUMBER UK-44-05

AUTHOR: Julian Fowler

CLAUSE: Introduction

CLASSIFICATION: Minor Technical

DESCRIPTION:

Is it true that the configuration_management_schema relates only to the manufacturing lifecycle stage? This seems to be contrary to the scope statement. It is not clear from the sentence describing this schema which product(s) are subject to configuration management.

PROPOSED RESOLUTION:

Clarify the intended applicability of the configuration_management_schema, and how it is applied to configuration management of different types of product at different stages in their life-cycle.

ISSUE NUMBER UK-44-06

AUTHOR: Julian Fowler CLAUSE: Introduction

CLASSIFICATION: Editorial

DESCRIPTION:

"Industrial automation" comprises much, much more than the topics listed in the bulleted list at the bottom of page vi, and in some cases would not include these.

PROPOSED RESOLUTION:

Replace the phrase "Industrial automation" by one more suited to the scope of this part. "Product data management" may be more appropriate.

ISSUE NUMBER UK-44-07

AUTHOR:: Julian Fowler **CLAUSE: Introduction**

CLASSIFICATION: Editorial

Dama 2 of 8

STEP - IGR: Product structure configuration

DESCRIPTION:

The idea of "complexity" is subjective and should not form part of the description of an international standard.

PROPOSED RESOLUTION:

Remove references to "complexity" of product structure, etc.

ISSUE NUMBER UK-44-08

AUTHOR: Julian Fowler CLAUSE: Introduction, 1

CLASSIFICATION: Minor Technical

DESCRIPTION:

There are a number of contradictions between the scope statement (clause 1) and the overview of this part provided in the Introduction. In particlar, the Introduction implies a number of scope constraints with respect to life-cycle phases. In particular, the text of Introduction refers explicitly to applicability of the schemas defined in this life-cycle part to design and manufacturing informartion, and nowhere to their applicability to later life-cycle stages.

PROPOSED RESOLUTION:

Rewrirte the sections of the Introduction that summarize the schemas defined in this part and their applicablity, avoiding any explicit or implied variation from the scope described in clause 1.

ISSUE NUMBER UK-44-09

AUTHOR: Julian Fowler

CLAUSE: 1

CLASSIFICATION: Minor Technical

DESCRIPTION:

It is not clear from the scope statement whether the term "product" refers to individual things or classes of things. There are some cases where this is clear from context (e.g., in the bullet following example 2 - individual things do not have versions); however, it should in all cases be made clear whether this part supports the represention of the structure of an individual product (as would be the case for operation and maintenance of a specific car, aircraft or process plant), or the representation of the common structure of the members of a class of products (which is what most of the text and examples refer to).

PROPOSED RESOLUTION:

Clarify the scope and provide additional examples.

ISSUE NUMBER UK-44-10

AUTHOR: Julian Fowler

STEP - IGR: Product structure configuration

CLAUSE: 1

CLASSIFICATION: Minor Technical

DESCRIPTION:

Given that this part specifies may subtypes of the product_definition_relationship entity data type it is difficult to understand the restriction imposed by the first "out of scope" bullet item. Is the intent here to state that this part only includes relationships between product_definitions that exist and/or are valid for the same life-cycle stage?

Clarify this exclusion from scope.

ISSUE NUMBER UK-44-11

AUTHOR: Julian Fowler

CLAUSE: general

CLASSIFICATION: Editorial

DESCRIPTION:

The document does not satisfy a number of the requirements of the ISO Central Secretariat for presentation of international standards. These requirements are identified in a number of standing document ballot issues (and one SEDS issue) against the ISO 10303 Supplementary Directives (SC4 N858). These include: placement of copyright notice in page footers, wording of page 1 header, form of reference to "to be published" normative references, etc.

PROPOSED RESOLUTION:

Address all minor editorial issues in parallel with updates to the SDs - current plans imply that revised SDs should be available during the ballot issue resolution period for this part.

ISSUE NUMBER UK-44-12

AUTHOR: Julian Fowler

CLAUSE: 3.3,2

CLASSIFICATION: Minor Technical

DESCRIPTION:

Does "instance" here have the meaning defined in ISO 10303-11, i.e., "a named value"? If so, then this definition is incorrect, as the nodes of the graph referred to should be (in EXPRESS terms) complex entity instances.

PROPOSED RESOLUTION:

Clarify this definition, possibly by substituting another term for "instance". Part 43 uses "data element" as a general term that is roughly synonymous with "instance" but does not introduce the overhead of the EXPRESS instance model.

ISSUE NUMBER UK-44-13

AUTHOR: Julian Fowler

D. . 4 ..C.

STEP - IGR: Product structure configuration

CLAUSE: : 3.3.8

CLASSIFICATION: Editorial

DESCRIPTION:

The use of "when" in this definition implies that there is a temporal basis for effectivity.

Replace "when" by "the circumstances in which", or similar.

ISSUE NUMBER UK-44-14

AUTHOR: Julian Fowler

CLAUSE: 3.3.9

CLASSIFICATION: Editorial

DESCRIPTION:

This appears to be three concatenated definitions!

PROPOSED RESOLUTION:

If there is a specific meaning that applies to the phrase "form, fit and function" that is distinct from the combination of the three terms, this should be provided. Otherwise, "form", "fit" and "function" should be separately defined terms (or omitted, if their common/dictionary definitions are sufficient).

ISSUE NUMBER UK-44-15

AUTHOR: Julian Fowler

CLAUSE: 3.3.12

CLASSIFICATION: Editorial

DESCRIPTION:

Is "lot" synonymous with "batch"? In the example provided a group of yarns or textiles dyed using the same (physical) dye are generally identified by a common batch number. In the COED (9th edition) "batch" includes a definition corresponding to that given here: "lot" does not. Is this a US-English usage?

PROPOSED RESOLUTION:

Indicate that batch is a synonym for lot.

ISSUE NUMBER UK-44-16

AUTHOR: Julian Fowler

CLAUSE: 4.3.1

CLASSIFICATION: Minor Technical

DESCRIPTION:

The definition of this entity data type implies that interchangeability is directed. In fact, if this entity data type represents the interchangeablity of A and B which is equivalent to the:

STEP - IGR: Product structure configuration

PROPOSED RESOLUTION:

Clarify the definition of this entity type, stating that the general case is that this relationship is symmetric, and stating how its population can/should be constrained to indicate that it is not symmetric.

ISSUE NUMBER UK-44-17

AUTHOR: Julian Fowler

CLAUSE: 4.3.1

CLASSIFICATION: Minor Technical

DESCRIPTION:

This entity data type is semantically a specialization of the product_relationship entity data type defined in ISO 10303-41.

PROPOSED RESOLUTION:

Modify the EXPRESS declaration of this entity data so that it is a subtype of product_relationship (preferred), or add a note stating the semantic relationship and explaining that the structural relationship is not asserted for reasons of upward compatibility.

ISSUE NUMBER UK-44-18

AUTHOR: Julian Fowler

CLAUSE: 4.3.1

CLASSIFICATION: Minor Technical

DESCRIPTION:

Are the intended semantics of this entity data type that (a) it is possible for one product to be substituted for another, (b) it is permitted for one product to be substituted for another, or (c) both. The use of "may" in the definitions of the .base and .alternate relationships implies (b).

PROPOSED RESOLUTION:

Clarify definition - if the intent is (c) then provide examples of usage in both cases.

ISSUE NUMBER UK-44-19

AUTHOR: Julian Fowler

CLAUSE: 4.3.2

CLASSIFICATION: Minor Technical

DESCRIPTION:

The definition of this entity data type implies that it is abstract with respect to its subtypes:

PROPOSED RESOLUTION:

STEP - IGR: Product structure configuration

Reword the definition to remove the implied/incorrect constraint.

ISSUE NUMBER UK-44-20

AUTHOR: Julian Fowler

CLAUSE: 4.3.2

CLASSIFICATION: Editorial

DESCRIPTION:

NOTE 5 states that the reference_designator may be made unique in a schema that uses or specializes this entity data type. This should also state that a schema that uses or specializes it can also make population of this attribute mandatory.

PROPOSED RESOLUTION:

Reword as: "The reference_designator can be made mandatory, or constrained to be unique, or both, in a schema that uses or specializes this entity data type." Note use of "can" (possibility) rather than "may" (permission).

ISSUE NUMBER UK-44-21

AUTHOR: Julian Fowler

CLAUSE: 4.3.5

CLASSIFICATION: Minor Technical

DESCRIPTION:

The definition of this entity data type implies that some activity of transformation is involved (albeit unspecified).

PROPOSED RESOLUTION:

Reword the definition to state that this entity data type represents an association between two products, such that one is the result of applying a manufacturing process to the other.

ISSUE NUMBER UK-44-22

AUTHOR: Julian Fowler

CLAUSE: 4.3.5

CLASSIFICATION: Minor Technical

DESCRIPTION:

The definition of this entity type implies that one product is made from another. The EXPRESS declaration does not preclude an instantiation in which a make_from_usage_option associations:

two product_definitions for the same product.

Add a constraint to the entity data type declaration:

WR2:

STEP - IGR: Product structure configuration

SELF\product_definition_relationship.related_product_definition..formation.of_product

:<>:
SELF\product_definition_relationship.relating_product_definition..formation.of_product;
(this constraint may actually be best defined in the product_definition_usage - I have not
assessed the impact of placing this constraint in the supertype)

ISSUE NUMBER UK-44-23

AUTHOR: Julian Fowler

CLAUSE: 5.3.5

CLASSIFICATION: Minor Technical

DESCRIPTION:

The distinction between product_concept, product (Part 41) and product_category (Part 41) is not clear. All three entity data types appear to represent (or be capable of representing) classes of product. They do not appear to be truly distinct concepts; rather, they represent classes of product with different types of classification basis. Example 1 appears to state that organizations manufacture product_concepts, not products.

PROPOSED RESOLUTION:

Clarify the definition of this entity data type and provide examples that clearly distinguish it from the product and product_catgeory entity data types in Part 41.

ISSUE NUMBER UK-44-24

AUTHOR: Julian Fowler

CLAUSE: 6.3

CLASSIFICATION: Editorial

DESCRIPTION:

ISO CS has granted SC4 an exception to the requirements of IDP3 that allows for "singleton" subclauses. It is therefore not necessary to have single subclause for this type declaration.

PROPOSED RESOLUTION:

Make 6.3 Configuration management type definitions, 6.3.1 Configuration design item

German Vjot and Comments on ISO 10303-44.2

The German vote is YES with the following comments

Issue Reference No.: GER-44.2-01

ORIGINATOR:

Bernd G. Wenzel, Eurostep, Bernd.Wenzel@Eurostep.com

DATE:

1999-09-12

SENTENCE/ABSTRACT/KEYWORD:

Mandatory attribute of PRODUCT_CONCEPT should be OPTIONAL

DESCRIPTION:

The attribute MARKET_CONTEXT in entity PRODUCT_CONCEPT should be OPTIONAL. Otherwise implementations of AP214 are forced to provide faked data. This is not only unnecessary effort. It also contradicts the principles of the ISO 9000 series of standards, because it is practically impossible to define the responsibility for such data in any reasonable way.

PROPOSED SOLUTION:

Make the attribute OPTIONAL

CLASSIFICATION1:

minor/technical

CLAUSE:

5.3.5

PAGE:

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RELATED ISSUE:

RELATED GRAPHIC:

Issue Reference No.: GER-44.2-02

ORIGINATOR:

Bernd G. Wenzel, Eurostep, Bernd.Wenzel@Eurostep.com

DATE:

1999-09-13

SENTENCE/ABSTRACT/KEYWORD:

Mandatory attribute of PRODUCT_CONCEPT_FEATURE should be OPTIONAL

DESCRIPTION:

The attribute NAME in entity PRODUCT_CONCEPT_FEATURE should be OPTIONAL. Otherwise implementations of AP214 are forced to provide faked data. This is not only unnecessary effort. It also contradicts the principles of the ISO 9000 series of standards, because it is practically impossible to define the responsibility for such data in any reasonable way.

PROPOSED SOLUTION:

Make the attribute OPTIONAL

CLASSIFICATION1:

minor/technical

CLAUSE:

5.3.6

PAGE:

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RELATED ISSUE:

RELATED GRAPHIC:

__ Issue Reference No.: GER-44.2-03

ORIGINATOR:

Bernd G. Wenzel, Eurostep, Bernd.Wenzel@Eurostep.com

DATE:

1999-09-13

SENTENCE/ABSTRACT/KEYWORD:

Mandatory attributes of CONFIGURATION_ITEM should be OPTIONAL

The attributes ID and NAME in entity CONFIGURATION_ITEM should be OPTIONAL. Otherwise implementations of AP214 are forced to provide faked data. This is not only unnecessary effort. It also contradicts the principles of the ISO 9000 series of standards, because it is practically impossible to define the responsibility for such data in any reasonable way.

PROPOSED SOLUTION:

Make the attribute OPTIONAL

CLASSIFICATION1:

minor/technical

CLAUSE:

6.4.4

PAGE:

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RELATED ISSUE:

RELATED GRAPHIC: